

**REMARKS**

**STATUS OF THE CLAIMS**

Claims 1, 4-8, and 11-22 are presently pending. Claims 1 and 8 have been amended to correct typographical errors. By this Amendment, claims 4 and 11 have been amended to further define the alkylphosphoro(mono)thioate compound. Claims 1, 8, 18 have been amended to further define the additive, composition, and method. Support for these amendments can be found in the originally filed specification, for example at page 1, line 9 to page 2, line 6 and page 6, lines 7-30. No new matter has been added.

**REJECTIONS UNDER 35 U.S.C. §112, FIRST PARAGRAPH**

The Examiner has rejected claims 4-5 and 11-12 under 35 U.S.C. §112, first paragraph because the specification, "while being enabled for the disclosed substituents, does not reasonably provide enablement for all of the substituents encompassed by 'substituted' of the instant claims." See page 2 of the Office Action. The Examiner has also argued that claims 4-5 and 11-12 recite "substituted" without specifying the substituents and thus, allegedly "encompass all possible substituents. The instantly claimed 'substituted' reads on an infinite number of compounds resulting from the potentially infinite number of substitutions which can be performed...." See *id.* Applicants disagree with the Examiner; however, to advance prosecution, claims 4 and 11 have been amended to recite where each of R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is, independently, an unsubstituted alkyl group or a hydrogen atom, and where at least one of R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is an unsubstituted alkyl group, and where each of X<sup>1</sup>, X<sup>2</sup>, and X<sup>3</sup> represents an oxygen

atom. Therefore, the rejection is moot, and Applicants respectfully request reconsideration and withdrawal of the rejection.

**REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH**

The Examiner has also rejected claims 1, 4-8, and 11-22 under 35 U.S.C. §112, second paragraph because claims 1 and 8 recite “including” with regard to component (b). Claims 1 and 8 have been amended to replace the term “including” with the term “comprising.” Therefore, the rejection is moot, and Applicants respectfully request reconsideration and withdrawal of the rejection.

The Examiner has further rejected to claims 6 and 13 because “it is unclear what is encompassed by ‘minor amount’ and ‘major amount’...because these are relative amounts.” See *id.* at page 4. Applicants respectfully submit that one of ordinary skill in the art would understand that a “major amount” may be understood to mean greater than or equal to about 50%, and a “minor amount” may be understood to mean less than about 50%, as is commonly understood in the art.

**REJECTIONS UNDER 35 USC §103**

1. U.S. Patent Application No. 2002/0119895 in view of U.S. Patent No. 4,755,311, STN Structure, and U.S. Patent No. 4,293,432

The Examiner has rejected claims 1, 4-5, 7-8, and 11-20 under 35 USC §103(a) as being unpatentable over U.S. Patent Application No. 2002/0119895 to Cook et al. (hereinafter “Cook”) in view of U.S. Patent No. 4,755,311 to Burjes et al. (hereinafter “Burjes”), STN Structure, and U.S. Patent No. 4,293,432 to Papay et al. (hereinafter “Papay”). See page 4 of the Final Office Action. Applicants respectfully submit that *Cook*, *Burjes*, and *Papay* are directed to lubricating compositions for use in

transmissions, such as automatic and manual transmissions, and engine crankcases, respectively. See para. [0001] to *Cook*; col. 1, line 24 to *Burjes*; and *Abstract of Papay*. However, presently amended claims 1, 8, and 18 are directed to a wind turbine gear additive concentrate and composition, and a method of manufacturing a composition suitable for use in a wind turbine gear assembly. One skilled in the art would not necessarily consider using compositions for transmissions and engine crankcases as lubricants for wind turbine applications. As described in the present specification, wind turbine applications are subject to environments and operated under conditions not generally encountered in automatic and manual transmissions. For example, in a conventional wind turbine, the gear box connects to a low-speed shaft turned by the wind turbine rotor to a high speed shaft that drives the generator to increase the rotational speed up to a suitable speed required for most generators to produce electricity. This geared solution can result in a torque through the system of close to 2 million N\*m. This high torque can put a large amount of stress on the gears and bearings in the geared wind turbine. Moreover, gearless direct drive wind turbines are generally open air models, allowing cold air to pass through, which may pose an increased risk of corrosion, especially in offshore installations. See page 1, lines 18-30. Thus, compositions suitable for transmissions and engine crankcases, which generally are not subject to such high torque and are usually not configured to be open air models like wind turbines, are not necessarily suitable for use in or provide sufficient wear protection for wind turbine assemblies.

STN Structure does not overcome the deficiencies of *Cook*, *Burjes*, and *Papay*. Therefore, because neither *Cook*, *Burjes*, nor *Papay* teaches or suggests lubricating

compositions suitable for use in wind turbine gear applications, the present invention is not obvious in light of *Cook*, *Burjes*, *STN* structure, and *Papay*.

For at least these reasons, *Cook*, *Burjes*, *STN* structure, and *Papay* do not render the present invention obvious. Applicants respectfully request reconsideration and withdrawal of the rejection.

2. *Cook*, *Burjes*, *STN* Structure, and further in view of U.S. Patent No. 5,942,470

The Examiner has rejected claim 6 under 35 USC §103(a) as being unpatentable over *Cook* in view of *Burjes*, *STN* Structure as applied to claims 1, 4-5, 7-8, and 11-20 above, and further in view of U.S. Patent No. 5,942,470 to Norman et al. (hereinafter "Norman.") See page 2 of the Final Office Action. Applicants respectfully submit that claim 6 depends from independent claim 1 and is patentable for the same reasons as claim 1. In particular, *Cook* in view of *Burjes* and *STN* Structure do not teach or suggest claims 1, 4-5, 7-8, and 11-20 for at least the reasons discussed above.

Moreover, *Norman* does not overcome the deficiencies of *Cook* in view of *Burjes* and *STN* Structure. In particular, *Norman* teaches lubricating composition suitable for use in automotive gear oils; however, the reference does not teach or suggest a wind turbine gear additive concentrate and composition, and a method of manufacturing a composition suitable for use in a wind turbine gear assembly.

For at least these reasons, the combination of *Cook*, *Burjes*, and *STN* Structure in view of *Norman* does not render the present invention obvious. Applicants respectfully request reconsideration and withdrawal of the rejection.

3. Cook in view of *Burjes*, *STN Structure*, *Papay*, and further in view of U.S.

Patent No. 4,710,100

The Examiner has rejected claims 21-22 under 35 U.S.C. §103(a) as being unpatentable over *Cook* in view of *Burjes*, *STN Structure*, *Papay*, and further in view of U.S. Patent No. 4,710,100 to Laing et al. (hereinafter "*Laing*"). The Examiner has argued that the difference between *Laing* and the present invention is the requirement in the present claims of specific composition. However, the Examiner has asserted that "in light of the motivation for using specific lubricant disclosed by *Cook* et al., it would therefore have been obvious to one of ordinary skill in the art to use such lubricant in the wind turbine of *Laing* et al. ...." See page 8 of the Office Action. Applicants strongly disagree for at least the reasons discussed above.

In particular, a skilled person would not necessarily consider using compositions for transmissions and engine crankcases as lubricants for wind turbine applications. As discussed above, wind turbine applications are subject to environments and operated under conditions not generally encountered in automatic and manual transmissions. For example, wind turbine applications can be subject to high torque, which can put a large amount of stress on the gears and bearings, and increased risk of corrosion due to open air configurations. Thus, compositions suitable for transmissions and engine crankcases, which generally are not subject to such high torque and are usually not configured to be open air models like wind turbines, are not necessarily suitable for use in or provide sufficient wear protection for wind turbine assemblies.

For at least this reason, one skilled in the art would not consider combining the teachings of *Cook*, *Burjes*, *STN Structure*, and *Papay* with *Laing* to arrive at the claimed

invention, absent the teachings of the present disclosure. Applicants respectfully request reconsideration and withdrawal of the rejection.

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-2961.

Respectfully submitted,

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